

**REMARKS****Status of the Claims**

Upon entry of the amendment above, claims 1-32 will be pending, claims 1, 16, and 24 being independent.

**Summary of the Office Action**

Claims 1-10 are rejected under 35 USC §112, first paragraph, as being based upon a non-enabling disclosure.

Claims 4 and 8-10 are rejected under 35 USC 112, second paragraph, as being indefinite.

Claims 1 and 4-6 are rejected under 35 USC 102(b) as being anticipated by CORNU (U.S. Patent No. 4,121,854).

Claims 2 and 3 are rejected under 35 USC 103(a) as being unpatentable over CORNU in view of MARTIN (U.S. Patent No. 6,659,494).

Claims 7 and 8 are rejected under 35 USC 103(a) as being unpatentable over CORNU in view of SALOMON (U.S. Patent No. 4,383,702).

Claims 9 and 10 are rejected under 35 USC §103(a) as being unpatentable over CORNU in view of SALOMON and MARTIN.

**Response to the Office Action****A. Withdrawal of Rejection Under 35 USC 112, First Paragraph**

In response to the rejection of claims 1-10 under 35 USC 112, first paragraph, Applicants have amended independent claim 1 by deleting the expression upon which the rejection is based, viz., "with the exception of any other energy."

Accordingly, reconsideration and withdrawal of the rejection is requested.

**B. Withdrawal of Rejection Under 35 USC, 112, Second Paragraph**

In response to the rejection of claims 4 and 8-10 under 35 USC, 112, second paragraph, Applicants have amended the claims intended to overcome the issues raised in the rejection.

First, claim 4 has been amended consistent with the manner by which the claim is explained by the Examiner to have been interpreted, viz., "air cylinder/jack" to "air cylinder or jack."

Second, to remedy the lack of antecedent bases in claim 8 of the terms "the plate" and "the bending zone," Applicants have changed the dependency of claim 8 from claim 1 to claim 7. The expression "the plate" finds antecedent basis in claim 11 (from which claim 7 depends) and the expression "the bending zone" finds antecedent basis in claim 7.

Third, claim 9 has been amended to add antecedent basis for "the solenoid valve."

**C. Withdrawal of Rejection Under 35 USC, 102(b) Based Upon CORNU**

At least for the following reasons, Applicants request that the rejection of claims 1 and 4-6 based upon CORNU, under 35 USC §102(b), be withdrawn.

Independent claim 1 has been amended to specify that the source of pneumatic energy comprises "a reservoir of pressurized gas."

By contrast, CORNU is directed to a ski binding that utilizes a pyrotechnic charges 22 (i.e., cartridges) as a source of pneumatic energy for boot release.

Therefore, Applicants' invention relies upon a source of gas that had been placed under compression and its decompression provides the invention with the necessary energy for performing the function of releasing a boot from a boot retention assembly.

In CORNU, the pyrotechnic energy consists in generating a gas by the explosion of explosive material which is ignited. There is no reservoir of a compressed gas in a pyrotechnic device.

The foregoing is consistent with Applicants' Background of the Invention in their specification. In fact, Applicants had brought to attention the CORNU patent in paragraph 0007 of their application. In the context of their invention, Applicants provide an alternative, *i.e.*, an improvement over pyrotechnic-type release systems.

At least in view of this difference, reconsideration and withdrawal of the rejection based upon CORNU is requested.

In addition, in claim 4, which depends from claim 1, Applicants call for the movable latch "*allowing* opening of the jaw."

As seen in the illustrated embodiment of the invention, if the latch 25 is moved from the position shown in Fig. 3 to the position shown in Fig. 5, the jaw is *allowed* to be opened. However, the movement of the latch to the Fig. 5 position does not *force* the jaw to be moved to be moved to an open position.

By contrast, and as explained in column 3, lines 57-68, of CORNU, the member 9 maintains continuous engagement with the cam surface 12 of the jaw 2 between the boot-retention position (Fig. 1) and the boot-release position (Fig. 4). Thus, Applicants submit that it would be an unfair characterization of the member 9 to say that a "tilting" movement thereof *allows* opening of the jaw. Instead, tilting of the member 9 *constrains* opening of the jaw. "Allowing" and "constraining" are distinctly different.

**D. Withdrawal of Rejection Under 35 USC, 103(a) Based Upon CORNU and MARTIN**

At least for the following reasons, Applicants request that the rejection of claims 2 and 3, based upon CORNU and MARTIN, under 35 USC §103(a), be withdrawn.

MARTIN discloses a ski binding in which is mounted upon a short track. Upon the depression of a release button, the binding is moved along the track to a position that spaces the binding from an opposite binding by a distance larger than the length of the ski boot.

An embodiment illustrated in MARTIN's Fig. 13 uses a compressed gas cartridge 18 to force a piston 1301 and a flange 15 in a direction that moves the binding along its track to release the skier's boot.

The rejection is premised upon the notion that using a compressed gas reservoir, as disclosed by MARTIN, in place of a pyrotechnic charge, as disclosed by CORNU, would have been obvious to one skilled in the art. The motivation cited for making such a modification of CORNU is to eliminate the hazards associated with the combustion of a pyrotechnic device.

Applicants respectfully traverse that conclusion.

First, Applicants submit that there is no disclosure or hint of any hazards associated with CORNU's pyrotechnic device. The combustion is contained within the chamber 26 and would not appear to create a hazard.

Second, CORNU's disclosure is exclusively focused on the class of bindings that use pyrotechnic charges. Column 1, lines 9-15, of his disclosure makes this clear. To eliminate the pyrotechnic aspect of CORNU's device, therefore, would destroy an essential element of the device. As explained in *In re Gordon*, 221 USPQ 1125 (Fed. Cir. 1984), a proposed modification is inappropriate as a consideration regarding obviousness under 35 USC §103 when such modification would render the prior art reference inoperable for its intended purpose.

Third, Applicants submit that the energy needs of the CORNU and MARTIN devices would appear to be significantly different, so that more than a mere substitution of a compressed gas reservoir system for a pyrotechnic system would be necessitated to provide a functional device.

That is, to open the jaw of the CORNU device, a significant amount of energy is needed to compress the spring 6 and open the jaw/clamp 2. On the one hand, the jaw needs for its opening that the piston 25 and the push-member 16 activate the rotation of

member 9, which cooperates with the cam surface 12 of the jaw. On the other hand, the opening of the jaw must compress the spring 6 until the nose 5 moves beneath the bolt 4.

Because a significant amount of energy is available by using pyrotechnic charges 22, which transfer all of their energy in one explosion, there is no need to have a simpler construction requiring less energy.

The compressed gas system of the MARTIN binding system is only needed to pull the binding away from the boot.

**E. Withdrawal of Rejection Under 35 USC 103(a) Based Upon CORNU and SALOMON**

At least for the following reasons given above in connection with the invention recited in claim 1, Applicants request that the rejection of dependent claims 7 and 8, based upon CORNU and SALOMON, under 35 USC §103(a), be withdrawn.

**F. Withdrawal of Rejection Under 35 USC 103(a) Based Upon CORNU, SALOMON, and MARTIN**

At least for the following reasons given about in connection with the invention recited in claim 1, Applicants request that the rejection of dependent claims 9 and 10, based upon CORNU, SALOMON, and MARTIN, under 35 USC §103(a), be withdrawn.

In addition, claim 10 has been amended to include a feature of the invention not taught or suggested by the references relied upon in the rejection. Specifically, in the final two lines of claim 10, Applicants call for the latch to release the jaw for movement to the open position, the latch not forcing movement of the jaw to the release position. An example of this relationship is shown in Applicants' Fig. 5.

**G. New Claims 11-32**

In the amendment above, new claims 11-32 have been added.

Claim 11 depends from independent claim 1 and provides further specificity regarding the latch. In the final three lines of claim 11, Applicants describe the latch being movable from a position in engagement with a surface to block movement of the jaw to a position spaced from said surface. This "possible" position (*i.e.*, "spaced from said

surface") is shown, e.g., in Fig. 5, which illustrates that the latch 25 is not in continuous engagement with the jaw 15. In neither CORNU nor MARTIN, for example, is there such possible position. In CORNU, e.g., the member 9 is in constant engagement with cam surface 12.

Claim 12 depends from independent claim 1 and provides further specificity with regard to a plate that supports the release block. The plate includes a first portion having a pair of arms connected at a base, and a second portion having a median arm connected to the base and extending between the two arms of the first portion.

Claim 13 depends from claim 12 and further specifies that the stress detector is mounted on the median arm.

Claims 14 and 15 correspond in subject matter to claims 11 and 12, respectively, but are more specific. The first portion of the plate is described as U-shaped and the second portion is described as T-shaped (see Applicants' Fig. 9, for example), with the stress detector mounted on the median arm of the T-shaped portion.

Claim 16 is independent and is somewhat patterned after claim 1, except that, rather than specifying that the source of pneumatic energy comprises a reservoir of compressed gas, claim 16 specifies that (consistent with an object of their invention) the source of pneumatic energy is non-pyrotechnic. In addition, claim 16 refers to the control system moves the movable latch to a position for *allowing* release of the jaw, rather than *forcing* movement of the jaw.

Claims 17-19 include recitations of various elements of the control system for moving the latch.

Claims 20 and 21 are directed, respectively, to the plate for supporting the jaw of the assembly and a support beneath the plate for raising the plate.

Claim 22 depends from claim 16 and further specifies the jaw to be part of a front binding of a front and rear binding assembly.

Claim 23 depends from claim 16 and is further directed to the aspect of the invention whereby the latch is movable to a position *spaced* from engagement with a surface

blocking movement of the jaw to a release position. This configuration is not taught or suggested by CORNU or MARTIN.

Claim 24 is an independent claim which includes subject matter of original claim 1 in addition to specific recitation of the plate for supporting a boot-retaining block of the invention, whereby the plate includes a U-shaped member and a T-shaped member. This particular configuration of plate is not believed to be taught or suggested.

Claim 26 depends from claim 25 and further specifies that the median arm of the T-shaped member comprises a bending zone and that a stress detector is mounted in the bending zone.

Claim 27 depends from claim 26 and further specifies that the source of pneumatic energy comprises a pressurized gas reservoir and that the control system for moving the latch comprises a jack, solenoid valve, and processing circuit for delivering a signal to the solenoid valve. Claim 28 further adds a pressure regulator.

Claim 29 depends from independent claim 24 and further specifies that the source of pneumatic energy comprises non-pyrotechnic energy.

Claim 30 depends from independent claim 24 and further specifies details of the control system that moves the latch.

Claim 31 depends from independent claim 24 and further describes the jaw as comprising a pair of wings and a sole clamp for retention of a front end of a boot.

Claim 32 further describes the U-shaped portion of the plate to extend longitudinally along a length of the assembly.

#### **SUMMARY AND CONCLUSION**

The grounds of rejection advanced in the Office action have been addressed and are believed to be overcome. Reconsideration and allowance are respectfully requested in view of the amendment and remarks above.

A check is enclosed for payment of a claim fee. No additional fee is believed to be due at this time. However, the Commissioner is authorized to charge any fee required for acceptance of this reply as timely and complete to Deposit Account No. 19-0089.

Further, although no extension of time is believed to be necessary at this time, if it were to be found that an extension of time were necessary to render this reply timely and/or complete, Applicants request an extension of time under 37 CFR 1.136(a) in the necessary increment(s) of month(s) to render this reply timely and/or complete and the Commissioner is authorized to charge any necessary extension of time fee under 37 CFR 1.17 to Deposit Account No. 19-0089.

Any comments or questions concerning this application can be directed to the undersigned at the telephone or fax number given below.

Respectfully submitted,  
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